



November 24, 1999

Ms. Magalie Roman Salas, Secretary  
Federal Communications Commission  
The Portals, TW-A325  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: Ex Parte Notification – WT Docket No. 99-168

Dear Ms. Salas:

This letter is being filed on behalf of Motorola, Inc. (Motorola). On Tuesday, November 23, 1999, the following participants met with Federal Communications Commission representatives: Bob Barnett, Executive Vice President, Motorola, Inc., and President, Commercial, Government and Industrial Solutions Sector; Rich Barth, Vice President and Director, Telecommunications Strategy and Regulation; John Hatton, Director of Telecommunications Engineering, Burlington Northern Sante Fe Railroad; Bruce Reichmann, Assistant Secretary, Ford Communications, Inc., Ford Motor Co.; Chris Wheatley, Senior Staff Analyst, ARINC (representing multiple airlines); Allen Gerth, CEO, Mobilcomm, Inc.; Ron Martinelli, President, AAA Communications, LLC, and Craig Szczultowski, Senior Vice President, Product Development and Engineering, EF Johnson.

Consecutive meetings were held with Commissioner Harold Furchtgott-Roth and Legal Advisor Bryan Tramont; Mark Schneider, Legal Advisor to Commissioner Susan Ness; Ari Fitzgerald, Legal Advisor to Chairman William Kennard, and Adam Krinsky, Legal Advisor to Commissioner Tristani. Mr. Barnett of Motorola was not present at the last meeting with Mr. Krinsky.

These Motorola representatives and the representatives of the Private Mobile Radio Service (PMRS) industry discussed the lack of spectrum available for private wireless. They also discussed the benefits of having like users next to public safety users for interference protection, mutual aid and economies of scale. The representatives also discussed reasons why CMRS cannot accommodate their business needs and expressed their interest in participating in the private wireless market.

Attached is a detailed summary of the discussion points.

Sincerely,

/s/

Richard C. Barth, Ph.D.

Vice President and Director, Telecommunications Strategy and Regulation  
Motorola, Inc.

1350 I St., N.W. Suite 400

Washington, D.C. 20005-3305

Phone: (202) 371-6868

FAX: (202) 842-3578

E-mail: [Rich.Barth@motorola.com](mailto:Rich.Barth@motorola.com)

Attachment

Cc: Commissioner Furchtgott-Roth  
Mark Schneider  
Adam Krinsky  
Jim Schlichting  
Kathleen Ham  
Marty Liebman  
Bob Barnett  
Chris Wheatley  
Ron Martinelli  
Stan Wiggins  
Gary Michaels

Bryan Tramont  
Ari Fitzgerald  
Peter Tenhula  
Dale Hatfield  
Robert Pepper  
John Hatton  
Bruce Reichmann  
Al Gerth  
Craig Szczultowski  
Mark Bollinger  
Julius Knapp

Issues Raised in FCC Meetings  
November 23, 1999

Summary:

The participants summarized their view that guard bands to protect public safety are a necessity; the optimum service to protect public safety is PMRS with close coordination as has historically been accomplished (and confirmed by the public safety community); band managers are an optimum vehicle for licensing the spectrum and there are significant economies of scale that would provide an added benefit to public safety of lowered equipment costs.

PMRS Applications are starved for spectrum:

The private sector participants represent a broad number of PMRS spectrum users: the airline and railroad industries (Burlington Northern and ARINC); large manufacturers (Ford); dealers who provide services and equipment to third parties (Mobilcomm and AAA Communications); and PMRS equipment manufacturers (EF Johnson and Motorola). Spectrum is difficult to acquire for new systems in many areas of the country (Cincinnati) and impossible in other areas of the nation (Greater New York City area). Users such as the Salvation Army in the New York City area have been seeking new dispatch radio services spectrum for nearly two years and none is available. In the recent aftermath of Hurricane Floyd in Northern New Jersey, the Salvation Army's support to the community was severely impaired by the lack of radio equipment. In Burlington Northern's 29 state service area there are severe spectrum shortages particularly on the West Coast, where they are forced to use radio services that are not optimum to their service requirements, thereby raising safety issues. The Federal Railroad Administration is imposing redundancy requirements on train operations that will require additional radio equipment and there is not spectrum available for this purpose in some areas. Safety in handling hazardous materials is compromised by the need for spectrum.

For manufacturers, internal radio communications in their facilities are also critical to safety and operations. Large manufacturers such as Ford have their own ambulance and safety operations on campus and need to have PMRS services for rapid response to emergencies and for interoperability with public safety. The airline industry is critically dependent on PMRS radio services, for operations, fueling and maintenance, but also for safety of the passengers/customers. The vast majority of all airline dispatch communications are 7-8 seconds in duration. The average time to set up a cellular call is often more than 25 seconds. Safety and efficiency, not to mention productivity, are all at risk and CMRS service providers cannot meet the operational requirements of this industry. In many cases, airport authorities are imposing requirement for features, such as antenna farms for all on site communications services that make it impossible to provide adequate coverage via CMRS services. There are examples where airline expansion required quick access to new radio services and CMRS services were temporarily used. However, when these services proved inadequate to the task, they were

replaced with PMRS services. In some areas such as Newark Airport in New Jersey, lack of spectrum is impeding the expansion of airline operations.

Dealers provide radio equipment and support services to a broad user base, including public safety entities. A lack of spectrum is increasingly making it difficult to provide mutual aid support between public safety and private security services, private ambulance services and others who are performing public safety-like services to the public.

For all of these entities there is often a need for radios that are industrial quality, heavy duty, with special noise suppression and ability to withstand severe conditions. CMRS radios are not manufactured to the appropriate specifications and the market is not large enough to warrant special design of such radios for this user base.

#### Interoperability with Public Safety:

Because of the unique nature of the user base for PMRS services, this community requires special spectrum allocations through a public interest determination of the FCC. In particular, the public safety community relies on many in the PMRS community as an adjunct to their services. When there is a gas leak, interoperability with key gas company operations are critical to public safety. In many cases, there are informal sharing arrangements among the public safety community and others who support the safety of the public that allow, for example, the ambulance service of a Ford Motor company plant to retain and use as required radios that operate on public safety frequencies. In many cases, the public safety community provides these radios and in other cases an individual radio can be manufactured to provide channel operation on both public safety channels and PMRS channels. It is very important to note that nearly all communities in America, and in nearly all operations such as airlines and manufacturing plants, there is an agreed Emergency and Disaster Planning Process, including documentation that spells out in great detail these kinds of mutual aid operations and sharing of equipment.

Accommodating these uses across the nation requires spectrum adjacent to or very near to public safety allocations. The allocation to public safety in this band of spectrum, therefore, implicitly requires an allocation of PMRS spectrum in nearby bands to be able to retain this use of the radio services. Furthermore, the rules for use of the PMRS band should permit the construction of this kind of radio.

#### Manufacturing Economies of Scale:

PMRS and public safety radio systems are virtually identical, from manufacturer to manufacturer. The costs of research, development and production of radio equipment can therefore be shared between the public safety community and PMRS users if they have nearby spectrum. EF Johnson would estimate that the cost of a radio alone, not counting infrastructure, could be 15-30% lower for public safety if adjacent band sales to the PMRS community would allow sharing of these costs of bringing the product to market. Taking a notional cost of a public safety radio of \$1000, and a conservative 15% savings

of \$150, and multiplying times only the new police hired over the past several years by state and local authorities with Federal Funds (100,000 new officers on the street) this realizes an immediate savings to these state and local authorities of \$15,000,000 merely in equipping these officers with radios. The Commission in allocating spectrum in the 746-806 MHz band cannot ignore this “public good” from an adjacent band allocation to PMRS. Infrastructure savings could also be considerable.

Dual band radios may be a possible solution to these needs from a technology viewpoint, however instead of providing savings to the public safety and PMRS community, the costs would be significantly more than providing single band radios that can be manufactured to accommodate both the public safety allocation already completed and an adjacent band PMRS allocation.

#### Band Manager Rules and Competition:

This community does not believe that extensive rules to ensure competition or “fair access” to the spectrum once won by a licensee, band manager, manufacturer, or otherwise, are required. There is adequate competition provided by two different bands of 1.5x2 MHz of spectrum, and price gouging or other outcomes is unlikely. Neither Motorola nor EF Johnson are concerned about getting access to spectrum if the other company acquires it at auction and acts as a band manager. Most of the participants voiced a view that the spectrum should be auctioned as two nationwide 1.5x2 MHz bands. Smaller geographic blocks would make some services more difficult to achieve. Overall, the fewer regulations imposed on the band manager, the greater number of likely bidders, as long as the spectrum is affirmatively allocated to PMRS services as previously defined by Motorola in this proceeding.